

# France



**Name:** Association Française Des Tunnels Et De L'espace Souterrain French Tunnelling And Underground Space Association

**Type of Structure:** non profit, open association

**Number of Members:** 1029 members - 548 French individuals, 149 foreign individuals, 74 retired, 39 students, 121 French collectives, 9 foreign collectives, 31 others (schools, bookshops), 16 Young members, 42 Master TOS.

## ASSOCIATION ACTIVITIES DURING 2018 AND TO DATE

**AFTES coordinates its activity with 6 committees:**

**Technical Committee:** The Technical Committee leads twenty active working groups, i.e. approximately 200 members involved. A new edition of recommendations has been launched in 2018. The recommendation GT 16 FR about impacts of tunnelling on the surrounding buildings was the 1st one to be edited and the recommendation GT 35 FR entitled "The management and use of excavation materials" will be published very soon in early January 2019.

**Underground Space Committee:** The 2nd phase of the national research project on underground space use has published its latest report leading to more than 36 research reports already edited, in addition to which are communications such as symposia or seminars. All this information is gathered on the national project website ([www.ville10d.fr](http://www.ville10d.fr)): socio-economic approach, environmental

approach, societal approach, data management visibility, transversal and synthesis. The Committee has also been very active in involving architects and urban planners around the topic of underground space use.

**Education Committee:** The twelve students enrolled in the 2017-2018 Master's degree in tunnelling in Lyon all received their diplomas at the end of the year, and all were hired immediately after their internship. The 2018-2019 promotion (8th promotion) includes seven students. Some modules of the Master's degree are open to everybody. The Committee is also involved in the setting up of specific training and courses; the need for competence is currently very high due to our huge tunnelling construction programme.

**Materials, Equipment, Products Committee:** The committee has played its role in serving manufacturers and suppliers by proposing and organizing presentation booths at congresses or

exhibitions: AITES WTC in April 2018 in Dubai, Savoie Fair in September in Chambéry, PIARC International Congress in Lyon in October. The committee also organised a technical conference on tunnelling boring machines.

**Congress Committee:** The committee is in charge of the preparation of the AFTES triennial International Congress that will be held from 21 to 23 September 2020 at the Palais des Congrès in Paris. The general theme chosen is "The underground, a space for innovation"

**Young members Committee:** A committee for young members has been set up in 2018. It is very active to gather more and more young professionals and involve them in our collective actions.

And AFTES is still publishing its Tunnels & Underground Space magazine in French and English. A lot of information is also available in both languages on the website <http://www.aftes.asso.fr>.

## CURRENT TUNNELLING ACTIVITIES

### Paris Eole

The extension of the railway line RER E to the west includes the construction of 8 km of tunnel between Saint-Lazare and Nanterre in a very dense urban area.

### Paris Extension of Metro line 14 North and South

From Saint-Lazare to Mairie de Saint-Ouen, 2 TBMs are on the home stretch of boring the 5.8km tunnel of the Northern extension of Line 14. The Southern extension to Orly Airport is just starting.

### Great Paris - Metro: Line 15 South

Two TBM have already been launched in 2018. The first one, from Champigny, will excavate 2.17km, the second 4.9km. Up to 10 TBMs will be mobilized to dig this 33km long new metro line from Noisy-Champs to Pont de Sèvres in the South of Paris.

### TELT Lyon - Turin

The 57.5km long international railway tunnel linking France and Italy is a major European issue. Initiating this huge project, the TBM Federica is digging 9km of exploratory gallery in the axis of the future base tunnel.

### ANDRA - Bure

Construction work on the underground laboratory began in 2000 in the commune of Bure. The experimental



commune of Bure. The experimental laboratory, 445m deep, is composed of a set of galleries where tests and studies have been conducted.

#### **SYTRAL - Line B of the Lyon metro**

The Lyon metro company, SYTRAL, began construction work of the 2.5km long extension on the Metro Line B between Oullins and Hôpital Sud.

#### **Rennes - Metro: Line B**

Completion of the civil works for the second automatic metro line for Rennes. Line B will connect the southwest and northeast of the city and will serve 15 stations by 2020

#### **FUTURE TUNNELLING ACTIVITIES**

##### **Great Paris - Metro: Line 16-17**

After line 15 South, the work programme will be extended to Lines 16 and 17. Lot 1 and Lot 2 of Line 16 have already been awarded, meaning the imminent start of construction of 25km of tunnel with 8 stations from Saint Denis Pleyel to Clichy Montfermeil.

##### **Toulouse: Metro: Line 3**

Line 3 (Aerospace Express) from Colomier to Labège is 28km of infrastructure including 18km in tunnel. Twenty stations are planned.

##### **Marseille - Metro: Extension of the Line 2**

A 13.8km long project between the Captain Gèze to St Loup Pagnol stations, including an underground section of approximately 4.8km with 5 stations.

##### **Meudon - Railway evacuation gallery**

Creation of an evacuation gallery, approximately 1km long, parallel to the existing in service railway tunnel, to allow the evacuation of RER C users via two emergency exits in the event of an accident.

##### **Lyon - Road**

The Grand Lyon Metropole is currently carrying out studies for the Ring of Science project. The first phase of this project will include a section of 14.6km, of which 12.9km is underground, west of Lyon.

##### **Lyon - Metro: New Line E**

SYTRAL has prepared preliminary studies for a 12km metro project linking the City centre to Tassin-la-Demi-Lune.

#### **STATISTICS**

- 1. Length or volume excavated - % mechanized / % conventional during 2018**  
10km (80% mechanized and 20% conventional)
- 2. Amount (USD or EUR) of tunnelling/underground space facilities awarded in 2018**  
€1000M
- 3. List of tunnels completed:**  
Nice tramway, Rennes Metro Line B
- 4. List of tunnels under construction**  
Paris Eole, Great Paris Metro, TELT Lyon - Turin, ANDRA - Bure Lyon Metro line B

# UNDERGROUND SOLUTIONS SEMINAR



## London, UK

Save the date

# 29th October 2019



#### More information online on

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preregister via [uss@bm-underground.com](mailto:uss@bm-underground.com)

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